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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,919	12/11/2003	Andrew Michael Britton	RAMAND	8596

7590 07/14/2005

DAVID GEORGE JOHNSON  
POST OFFICE BOX 286  
AITKIN, MN 56431

EXAMINER

JACKSON, TYRONE D

ART UNIT	PAPER NUMBER
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2862

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/733,919

Applicant(s)

BRITTON, ANDREW MICHAEL

Examiner

Tyrone Jackson

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/11/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____                                                 |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/11/03</u> .                                                            | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: Page 9, line 5 (actual) refers to fig. 10 that does not exist. Appropriate correction is required.

The abstract of the disclosure is objected to because line 3 refers to "34, 35" which should be "33, 34". Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claim 11 is objected to because in line 2, "an" should be "a". Appropriate correction is required.

Claim 3 is objected to because it lacks a period. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 depends on itself. Correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson {5,504,428} in view of Weiss {5,343,676}.

Regarding claims 1, 2, 10 and 11 Johnson discloses a metal detector comprising an oscillator coil **27** and two input coils **26 and 28** (three magnet/coils) that emit a magnetic field and generates a signal in response to a disturbance of the magnetic field (column 2 lines 4-6, 9-11), also a signal processor that measures and compares the ratio of the different signals so as to determine the physical location of an item causing the disturbance of the magnetic field (column 4 lines 35-55). Regarding claim 3, Johnson teaches a metal detector comprising a case housing the oscillator (column 2 lines 57-58), multiple cavities within the case to house the product, means for permitting the product to enter and exit the cavities (Fig. 4), and a conveyor means for transporting the product through the cavity (column 2 lines 54-56). Regarding claims 4, 5, and 12 Johnson discloses an apparatus wherein the signal processor associates a disturbance of the magnetic field with a metallic item and determines if it resides inside or outside of the cavity (the position) in column 4 lines 57-60. Johnson, however, does not include an oscillator. Weiss does teach an oscillator (magnetic field generating device, column 1 line 68) interconnected to the coils so as to emit a magnetic field in the region.

It would have been obvious to one of ordinary skill in the art to include the oscillator taught by Weiss in conjunction with the metal detector system taught by Johnson so as to extend the range of the magnetic field while simultaneously decreasing the unwanted disturbances in the input coils (Weiss, column 1 lines 62-64).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Weiss as applied to claims 1 above, and further in view of the Applicant Admitted Prior Art (AAPA). Johnson and Weiss do not discuss a signal processor that separates the input signal. The AAPA teaches that modern digital processing techniques resolves the input signal into a resistive component and a reactive component (page 2 lines 15-18). It would have been obvious to one of ordinary skill in the art to use known modern digital processing techniques taught by the AAPA in the metal detector disclosed by Johnson in order to enhance the efficiency and reliability of the detector.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson, Weiss, and AAPA as applied to claims 1 and 6 and further in view of May et al {3,896,292}. Johnson and Weiss do not mention a flux concentrator. However May teaches mounting a flux concentrator adjacent to the oscillator coil to increase inductance (column 10 lines 50-52). It would have been obvious to one of ordinary skill in the art to add the flux concentrator taught by May to the metal detector disclosed by Johnson and Weiss to decrease the flux leakage outside of the system and increase the flux concentration within the system (column 11, lines 1-2).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4990850, 5654638, 5691640, 5896031 all disclose various types of metal detectors.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone Jackson whose telephone number is (571) 272-1812. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tyrone Jackson

7/6/05

  
RENEE LUEBKE  
PRIMARY EXAMINER